



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,341	09/25/2003	Stephen A. Baum	P-26,015 US1	7066
23307	7590	07/27/2007	EXAMINER	
SYNNESTVEDT & LECHNER, LLP			GROSS, CHRISTOPHER M	
1101 MARKET STREET			ART UNIT	PAPER NUMBER
26TH FLOOR			1639	
PHILADELPHIA, PA 19107-2950			MAIL DATE	DELIVERY MODE
			07/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/671,341	BAUM, STEPHEN A.
	<b>Examiner</b>	<b>Art Unit</b>
	Christopher M. Gross	1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 April 2007.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 46,47,49-51,54 and 56-85 is/are pending in the application.
- 4a) Of the above claim(s) 57,59 and 63-85 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 46,47,49-51,54,56,58,60-62 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____.                         |

## DETAILED ACTION

Responsive to communications entered 4/18/2007 and 5/3/2007 (supplementary). Claims 46-47,49-51,54,56,57-85 are pending. Claims 57,59,63-85 are withdrawn. Claims 46,47,49-51,54,56,58,60-62 are under consideration.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Priority***

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application); the disclosure of the invention in the prior application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Prods., Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994) [taken from MPEP 201.01]

The instant application, filed 9/25/2003 claims priority as a DIV of application 09/082,038 filed 05/20/1998 (now PAT 6,872,535). It is noted, however that sufficient support for superimposed solid supports is not disclosed in the earlier application (09/082038). See also new matter considerations below.

Art Unit: 1639

Therefore 9/25/2003 is the date for the purposes of prior art concerning claims 46,47,49-51,54,56,58,60-62.

***Withdrawn Objection(s) and/or Rejection(s)***

The rejection of claims 46-47, 49-51, 52-56,58, 60-62 under 35 U.S.C. 103(a) as being unpatentable over **Campbell** US Pat. No. 6,083,682 (7/00: filed 12/97) in view of **Moran et al.** WO 97/35198 (9/97: filed 3/96) as evidenced by Valerio et al (1993 Int. J. Peptide Protein Res. 42:1-9) is hereby withdrawn in view of applicant's amendments to the claims.

The rejection of Claims 46-47,49-51,54,56,58,60-62 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is hereby withdrawn in view of applicant's amendments to the claims.

The rejection of claims 46-47,49-51,54,56,58,60-62 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is hereby withdrawn in view of applicant's amendments to the claims.

***New Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1639

Claims 46,47,49-51,54,56,58,60-62 are rejected under 35 U.S.C. 102(b) as being anticipated by **Stein et al.**

*This rejection is necessitated by Applicant's amendment to the claims.*

The claimed subject matter per claim 46 is drawn to a method comprising the steps of:

(a) functionalizing a plurality of solid phase supports;

(b) placing the plurality of solid phase supports in a three-dimensional (3D) array using a support transfer device, wherein the 3D array of solid phase supports comprises a plurality of columns of solid phase supports with a plurality of superimposed layers of solid phase supports in the Z direction, and wherein the support transfer device is a rack comprised of a plurality of rods, each solid phase support having an aperture extending therethrough, the rods being extendable through the apertures in the solid phase supports for support of a plurality of solid phase supports at a time, a mechanism to prevent the solid phase supports from coming off the rack; and

(c) performing parallel synthesis of a library of molecules in the 3D array of solid phase supports.

Claim 47 is drawn to the method above plus performing the step of attaching an initial building block to each solid-phase support before step (b) (above).

Claim 49 is drawn to removing the solid-phase supports with said support transfer device.

Claim 50 is drawn to cleaving said library.

Art Unit: 1639

Claim 51 is drawn to assigning at least one unique building block to each layer of said 3D array.

Claim 54 is drawn to removing one layer of solid supports at a time.

Claims 56 and 58 are drawn to various solid-phase support resins.

Claim 60-62 are drawn to various obstruction and end caps for said rods.

**Stein et al** teach, throughout the document and especially the title, three-dimensional arrays for solid-phase parallel synthesis and a method of use.

Stein et al teach throughout the document and especially the abstract a) functionalizing solid-phase supports; b) placing supports in a 3D array; and c) performing parallel synthesis with 3D diversity. Stein et al further teach in the abstract a rack of rods sized to be inserted through supports and a mechanism to prevent supports from coming off the rack.

Fully eclipsed (as defined in 35 USC 112 first paragraph rejection below) superimposed solid phase supports are shown in figure 17 of Stein et al. Also shown in figure 17 of Stein et al are rods being extendable completely through apertures in multiple solid-phase supports. Said solid-phase supports of Stein et al are arranged in channels, so as to generate a column of solid phase supports.

Taken together, the method of Stein et al reads on claim 46.

Stein et al teach on p 1 line 21, functionalization of an initial building, such as set forth in claim 47.

Stein et al teach removing the solid-phase supports in claim 49, therein reading on instant claim 49.

Art Unit: 1639

Stein et al teach cleavage from the solid-phase supports in claim 50, therein reading on instant claim 50.

Stein et al teach in claim 51, assignment of a unique initial building block, therein reading on instant claim 51.

Stein et al teach in claim 54, removing of the solid-phase supports one layer at a time, therein reading on instant claim 54.

Stein et al teach various solid support materials on p 2, including grafted polyethylene, therein reading on claims 56 and 58.

Stein et al teach in figure 29 and p 40, lines 4-16 an obstruction device for keeping the solid phase supports immersed in liquid which also provides the means of limiting the movement of the solid-phase supports, therein reading on claims 60 and 62. In the same passage, Stein et al teach the use of an end cap, reading on claim 61.

### ***New Claim Rejection(s) – 35 USC § 112***

The following is a quotation of the **first** paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 46,47,49-51,54,56,58,60-62 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. 37 CFR 1.118 (a) states

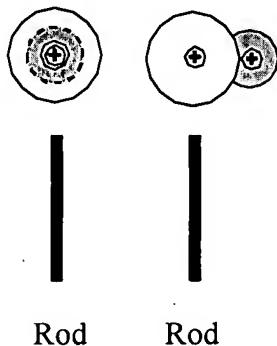
Art Unit: 1639

that "No amendment shall introduce new matter into the disclosure of an application after the filing date of the application".

*This rejection is necessitated by Applicant's amendment to the claims.*

Claim 46 has been amended insert a limitation directed to "superimposed" layers of solid-phase supports in the Z direction

Superimposed, such as in photography for instance, is taken as a type of overlay in which an upper layer may completely or partially obscure a lower layer. The two variations are illustrated below.



In the drawing above, looking down a channel (such as shown in figure 13 of the instant specification), the aperture of the front bead (white) is illustrated as a plus sign. The rear bead (gray) is shown in two alternative superimposed positions: on the left is "fully eclipsed" (obscured), whereas the right represents a "partial eclipse."

It is noted however, the specification as originally filed provided no implicit or explicit support for the "partial eclipse" superimposed positioning described above, especially in concert with a rod being extendable through *each* of the apertures of the solid-phase supports.

Applicants are reminded that it is their burden to show where the specification supports any amendments to the claims. See 37 CFR 1.121 (b)(2)(iii), the MPEP 714.02, 3<sup>rd</sup> paragraph, last sentence and also the MPEP 2163.07, last sentence.

MPEP 2163.06 notes "If new matter is added to the claims, the examiner should reject the claims under 35 U.S.C. 112, first paragraph - written description requirement.

*In re Rasmussen*, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981)." MPEP 2163.02 teaches that "Whenever the issue arises, the fundamental factual inquiry is whether a claim defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed...If a claim is amended to include subject matter, limitations, or terminology not present in the application as filed, involving a departure from, addition to, or deletion from the disclosure of the application as filed, the examiner should conclude that the claimed subject matter is not described in that application. MPEP 2163.06 further notes "When an amendment is filed in reply to an objection or rejection based on 35 U.S.C. 112, first paragraph, a study of the entire application is often necessary to determine whether or not "new matter" is involved. *Applicant should therefore specifically point out the support for any amendments made to the disclosure.*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Gross whose telephone number is (571)272-4446. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. Douglas Schultz can be reached on 571 272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher M Gross  
Examiner  
Art Unit 1639

cg

/Jon D. Epperson/  
Primary Examiner, AU 1639